

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS



WORLD
HEALTH
ORGANIZATION

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CX 5/15

CL 2003/9-FL
February 2003

TO: Codex Contact Points
Interested International Organizations

FROM: Secretary, Codex Alimentarius Commission
Joint FAO/WHO Food Standards Programme
FAO, 00100 Rome, Italy

SUBJECT: *Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods - Proposed Draft Revised Annex 2 - Permitted Substances at Step 3*

DEADLINE: **31 March 2003**

COMMENTS:	To:	Copy to:
	Mr. Ron Burke, Director Bureau of Food Regulatory, International and Interagency Affairs, Health Products and Food Branch, Health Canada, Bldg No. 7, Room 2395, Tunney's Pasture, Ottawa K1A 0L2, Canada Fax No. 613.941.3537 E-mail: codex_canada@hc-sc.gc.ca	Secretary Codex Alimentarius Commission Joint FAO/WHO Food Standards Programme – FAO Viale delle Terme di Caracalla 00100 Rome, Italy Fax: +39 (06) 5705 4593 E-mail: codex@fao.org

The 30th Session of the Committee on Food Labelling returned to Step 3 the Proposed Draft Revised Annex 2 - Permitted Substances of the *Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods* for further comments, revision by an electronic Drafting Group, and consideration at the next session. The Committee invited submissions for amendments to the lists in Annex 2 together with justification against Section 5 of the adopted *Guidelines* and taking into account the intent of the draft revised criteria arising from the meeting; and comments on the future maintenance of the lists in Annex 2 (ALINORM 03/22, paras. 19-25). Comments were requested in CL 2002/15-FL (May 2002) included in ALINORM 03/22 and CL 2002/50 (Reminder-October 2002).

The Proposed Draft Revised Annex 2 is hereby circulated for comments at Step 3 and consideration by the 31st Session of the Committee on Food Labelling (Ottawa, Canada, 28 April - 2 May 2003). The attached document includes the Report of the electronic Drafting Group and the following appendices:

- Appendix I: Proposed Revised Draft Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods, Annex 2 at Step 3, and
- Appendix II: Proposed Draft Amendments to Annex 2 - Permitted Substances: Evaluations Against Criteria (the Proforma Matrix).

Governments and international organizations wishing to submit comments should do so in writing, preferably by email, to the above addresses **before 31 March 2003**.

GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF ORGANICALLY PRODUCED FOODS

PROPOSED REVISED DRAFT AMENDMENTS TO ANNEX 2 AT STEP 3

REPORT AND RECOMMENDATIONS OF THE E-DRAFTING GROUP

Background

At the 30th session of the Codex Committee on Food Labelling (ALINORM 03/22 paras 14-26), the Committee agreed to:

- i) recirculate Annex 2 of the Guidelines at Step 3 inviting submissions for amendments to the lists together with justification against Section 5 of the adopted Guidelines and taking into account the intent of the draft revised criteria at Step 5 of the elaboration process (ALINORM 03/22, Appendix II);
- ii) invite comment on the future maintenance of the lists in Annex 2, and having regard for the approach, the process and the purpose of the lists within the Guidelines; and
- iii) convening an electronic Drafting Group to review the comments and proposals for amendments to the lists.

Comments were invited from Member Countries and interested International Non-Government Organizations (CL 2002/15-FL) by 15 October 2002. This deadline was subsequently extended to 30 November to provide further opportunity for the submission of comments. To facilitate the review of proposals for amendments to the lists, the Secretariat of the WG requested that a proforma matrix be used for such proposals. This would ensure consistency in both the information provided and that proposals were justified against the Criteria for amendments to the Lists of Substances in Annex 2 of the Guidelines.

In view of the number of participants in the E-Drafting Group, regional coordinators were nominated for the following geographic regions:

- . America: United States
- . Europe: Sweden
- . South Pacific: Australia
- . Asia: Japan
- . IGO: European Commission
- . INGOs: International Federation of Organic Agriculture Movements, and International Association of Consumer Food Organizations
- . Secretariat: Canadian Codex Office.

Comments received through regional coordinators or from any member country and INGOs were taken into account in the preparation of revised texts.

Proposals submitted in response to CL 2002/15-FL were received from: Chile, Denmark, Switzerland, the EC, IDF and IFOAM. All comments received have been collated into the working documents including those received on two subsequent rounds of E-discussions (by 10 January and by 10 February 2003). Denmark, Korea, Sweden, IACFO, the IDF and IFOAM responded to the later invitations to comment.

The Working documents attached herein include:

- Appendix I: Proposed Revised Draft Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods, Annex 2 at Step 3, and
- Appendix II: Proposed Draft Amendments to Annex 2 - Permitted Substances: Evaluations Against Criteria (the Proforma Matrix).

1. Overview of comments

1.a Proposed amendments to the lists

Of the comments submitted, the IDF and IFOAM responded fully, and the EC responded in part to the Criteria as set out in Section 5 of the Guidelines (GL 32-1999, Rev 1-2001, Section 5.1). However, all comments received have been included in the Proposed Revised Draft Annex 2, in accord with the principle of transparency adopted by the Codex Alimentarius Commission.

Accordingly, the collated comments in the Proposed Revised Draft Annex 2 include proposals received with or without justification against the Criteria set down for the amendment of the lists in Section 5 of the Guidelines.

- New proposals that have been justified against the Criteria are indicated by "YES" against reference to the nominating country/NGO and
- proposals received without justification, are identified by "NO" against reference to the nominating country/NGO,

Members of the E-Drafting Group were invited to comment on whether proposals NOT supported by justification against the Criteria should be accepted in reviewing the lists. Denmark, IAFCO, IDF and IFOAM indicated that such proposals should not be accepted. There were no opposing views on this point. In view of this, it is anticipated that new proposals that have not been justified against the Criteria set out in Section 5 of the Guidelines, will be deleted at the 31CCFL Working Group meeting.

Members of the E-Drafting Group were further invited to comment on the usefulness of the proforma matrix and ranking system contained therein as a tool to facilitate review of proposals. Denmark supported application of the matrix but suggested it had limitations in so far as it does not facilitate detailed descriptions of use of substances, including consequences if a substance is not permitted. IAFCO, IDF and IFOAM supported the use of the matrix.

1b. Structure of Appendix 2, Tables 3 and 4 of the Guidelines

Comments were received on the structure of Tables 3 and 4 of Appendix 2 from Denmark, Korea, Switzerland and IFOAM. Korea, Switzerland and IFOAM were in favour of establishing single positive lists applicable for all foodstuffs, whether of plant or of animal origin as, in general, additives used for plant products may also be used for animal products and because it is not always possible to distinguish clearly between plant and animal products, for example, canned foodstuffs combining meat with vegetables.

On the other hand, Denmark and IACFO sought that the lists be as short and restrictive as possible, and were in favour of retaining separate lists for additives and processing aids for animal products. IACFO stressed also the need for each member country to develop a list of substances that satisfies the requirements of the Guidelines (Section 5.2 refers) and that is agreed to by all stakeholders, including consumers. The EC suggested appending the lists for livestock and bee products to the end of the lists for plant products.

2. Future maintenance of the Lists

To assist in resolving this discussion, it may be worth recalling that these 'provisional' lists were developed at a time the Working Group considered there was insufficient experience in the preparation of organic livestock and bee products. Furthermore, although countries had quite extensive experience in the preparation and processing of organic products derived solely from plant and plant products, the Precautions to Annex 2 of the Guidelines adopted by the CAC in 1999 stated clearly that the lists do not attempt to be all inclusive or exclusive, or a finite regulatory tool, but rather provide advice to governments on internationally agreed inputs. The Guidelines stress that the system of review criteria as detailed in Section 5 of the Guidelines should be the primary determinant for acceptability or rejection of substances.

Comments received on this issue were:

- . Denmark seeks the development of short and restrictive lists in order to secure consumer confidence in organic farming;
- . Korea supports having positive lists rather than provisional lists in Codex through strict and decisive criteria and evaluation procedures in order to enhance consumers' confidence in organic products;
- . The EC considers the lists to be a very essential part of organic farming and that the Codex Guidelines will raise awareness in consumers that only a limited number and certain types of inputs are allowed for organic farming. The EC notes that it is important for commonly agreed lists to give guidance to all countries in their development of national lists as this will reduce the time needed for equivalency negotiations between trading countries;
- . IDF endorsed the principle to develop a single list of substances since there is concern that the concept of countries maintaining separate national lists that may vary from the Codex list could impact and impede international trade in organically produced foods.
- . IFOAM supports having an indicative list in Codex for the next few years, but based on strict and

conclusive criteria which needs to be further developed in such a way that both the criteria and the evaluation procedures support the development of organic agriculture while still maintaining high credibility with consumers; and

. IACFO, although concerned that the indicative list may be used on a national basis without adequate consideration, supports the Guidelines in the requirement that each country develop a list of substances.

In order to reach a consensus on this protracted discussion, Working Group members are invited to review the Foreword to the Guidelines, as well as Section 5 and the Precautions to Annex 2 with a view to reaching consensus at the 31st session of CCFL.

CONSIDERATIONS AND RECOMMENDATIONS

The Secretariat acknowledges the work of the E-Drafting Group the outputs of which have been collated in the attachments. Accordingly, Codex member countries and interested international organizations are invited to consider:

1. The Draft Proposed Revised Annex 2 and the accompanying Evaluation against Criteria (Proforma Matrix) having regard for:
 - . the lack of support for proposals that were received without justification against the criteria; and
 - . the potential to amalgamate the lists of additives and processing aids for livestock products, or link the lists for livestock and bee products at the conclusion of plant products in Tables 3 and 4.
2. The Proforma Matrix as an ongoing tool for evaluating proposals against the Criteria set out in Section 5 of the Guidelines, recognising that further improvements may be needed in the future. Should the proforma matrix be supported, options for managing its continued use include:
 - a) annex the matrix to the Guidelines; or
 - b) request the Secretariat issue the matrix on each occasion amendments/updates of the Permitted Substances are invited.
3. The nature and future maintenance of the Lists in Annex 2 of the Guidelines having regard for the intent of the Guidelines as set out in paragraph 3 of the Foreword to the Guidelines as adopted by the CAC in 1999. Present indications are that Codex should:
 - . retain indicative lists and reiterate the adopted provision that governments establish national lists against the Criteria set out in Section 5 of the Guidelines.
4. Procedure for finalising the revised lists in Annex 2: The 29th session of CCFL agreed to the review of the lists in Annex 2 for adoption at Steps 5/8 of the Codex Procedure.
5. Finally, a reminder that Member countries and INGOs were invited to submit comments on the Proposed Draft Amendments to Section 5 (Criteria) at Step 5 of the elaboration procedure (CL 2002/15-FL and ALINORM 03/22, para 21 refer) for consideration at the 31st session of the CCFL, May 2003.

**PROPOSED DRAFT REVISED GUIDELINES FOR THE PRODUCTION PROCESSING
LABELLING AND MARKETING OF ORGANICALLY PRODUCED FOODS**

At Step 3

ANNEX 2

PERMITTED SUBSTANCES FOR THE PRODUCTION OF ORGANIC FOODS

Precautions

1. Any substances used in an organic system for soil fertilization and conditioning, pest and disease control, for the health of livestock and quality of the animal products, or for preparation, preservation and storage of the food product should comply with the relevant national regulations.
2. Conditions for use of certain substances contained in the following lists may be specified by the certification body or authority, e.g. volume, frequency of application, specific purpose, etc.
3. Where substances are required for primary production they should be used with care and with the knowledge that even permitted substances may be subject to misuse and may alter the ecosystem of the soil or farm.
4. The following lists do not attempt to be all inclusive or exclusive, or a finite regulatory tool but rather provide advice to governments on internationally agreed inputs. A system of review criteria as detailed in Section 5 of these Guidelines for products to be considered by national governments should be the primary determinant for acceptability or rejection of substances.

TABLE 1: SUBSTANCES FOR USE IN SOIL FERTILIZING AND CONDITIONING

Substances	Description; compositional requirements; conditions of use
Dried Farmyard and poultry manure CHILE – NO	Need recognized by certification body or authority if not sourced from organic production systems. “Factory” farming ¹⁸ sources not permitted. For a higher level of precision, indicate the allowed animal species.
Liquid animal excrements (Slurry or urine, etc) CHILE _- NO	If not from organic sources, need recognized by inspection body. Preferably after controlled fermentation and/or appropriate dilution. “Factory” farming sources not permitted”. Use after a controlled fermentation and/or an adequate dilution. Indicate the animal species.
Composted animal excrements, including poultry manure and composted poultry manure CHILE – NO	Need recognized by the certification body or authority. For a higher level of precision, indicate the allowed animal species.
Manure and composted farmyard manure	“Factory” farming sources not permitted.
Dried farmyard manure and dehydrated poultry manure	Need recognized by the certification body or authority. “Factory” farming sources not permitted.
Guano	Need recognized by the certification body or authority.
Straw	Need recognized by the certification body or authority.
Compost and spent mushroom and Vermiculite substrate	Need recognized by the certification body or authority. The initial composition of the substrate must be limited to the products on this list.
Compost from organic household refuse Composted or fermented home refuse. CHILE – NO EC - IN PART see opposite	Need recognized by the certification body or authority. Forbid use for cultural reasons. Product obtained from source separated household waste, which has been submitted to composting or to anaerobic fermentation for biogas production. Only vegetable and animal household waste. Only when produced in a closed and monitored collection system. Maximum concentrations in mg/kg of dry matter: Cadmium 0,7; copper 70; nickel 25; lead 45; zinc 200; mercury 0,4; chromium (total 70; chromium (VI):)O(*). Only during a period expiring on 31 March 2006.

¹⁸ “Factory” farming refers to industrial management systems that are heavily reliant on veterinary and feed inputs not permitted in organic agriculture.

	<p>(*) Limit of determination.</p> <p><i>Comment: In order to avoid harmful impact on the balance of the soil and water ecosystems, maximum concentrations for the referred chemical elements should be fixed. Moreover, for the same reason, the use of these products should be time limited in order to gain more knowledge and experience related to the conditions and requirements.</i></p>
Compost from plant residues	----
<p>Processed animal products from slaughterhouses & fish industries:</p> <p>blood meal; hoof meal; horn meal; bone meal; degelatinized bone meal; fish meal; meat meal; feathers and hair meal; wool; fur; hair.</p> <p>CHILE – NO</p> <p>EC - Justification, see opposite.</p>	<p>Need recognized by the certification body or authority.</p> <p>For fur: maximum chromium concentration in 0mg/kg on dry matter basis</p> <p>Maximum concentration in mg/kg of dry matter of Chromium (VI:)O in case of fur.</p> <p><i>Comment: In order to avoid a harmful impact on the balance of the soil and water ecosystems, maximum concentrations for the referred chemical elements should be fixed in the case of fur.</i></p>
<p>By-products of food & textile industries</p> <p>SWITZERLAND – NO</p>	<p>Not treated with synthetic additives. Need recognized by the certification body or authority. Meat and bone meal not permitted.</p>
<p>Seaweeds and seaweed products.</p> <p>CHILE – NO</p>	<p>Need recognized by the certification body or authority.</p> <p>Restrict use in countries due to exhaustion of the resource.</p>
<p>Sawdust, bark and wood waste</p> <p>CHILE – NO</p> <p>SWITZERLAND – NO</p> <p>EC - Justification, see opposite</p>	<p>Need recognized by the certification body or authority.</p> <p>Not chemically treated after the trees have been cut down.</p> <p>Of wood not treated chemically.</p> <p>Wood not chemically treated after felling</p> <p><i>Comment: In order to avoid a harmful impact on the balance of the soil and water ecosystems and air quality..</i></p>
<p>Wood ash</p> <p>CHILE – NO</p> <p>EC - Justification, see opposite.</p>	<p>Need recognized by the certification body or authority.</p> <p>From wood that has not been chemically treated after the trees have been cut down.</p> <p>Same as Chile.</p> <p><i>Comment: In order to avoid a harmful impact on the balance of the soil and water ecosystems and air quality.</i></p>

Natural phosphate rock.	Need recognized by the certification body or authority. Cadmium should not exceed 90mg/kg P ₂ O ₅
Basic slag	Need recognized by the certification body or authority.
Rock potash, mined potassium salts (e.g. kainite, sylvinite)	Less than 60% chlorine
Sulphate of potash (e.g. patenkali)	Obtained by physical procedures but not enriched by chemical processes to increase its solubility. Need recognized by the certification body or authority.
Calcium carbonate of natural origin (e.g. chalk, marl, maerl, limestone, phosphate chalk)	----
Magnesium rock	----
Calcareous magnesium rock	----
Epsom salt (magnesium-sulphate)	----
Gypsum (calcium sulphate) CHILE – NO / SWITZERLAND - NO	Only from natural sources/origin. ----
Stillage and stillage extract	Ammonium stillage excluded
Sodium chloride CHILE – NO	Only mined salt. Need recognized by the certification body or authority.
Sodium nitrate CHILE – NO	Use restricted to no more than 20% of the total nitrogen requirement of the crop.
Aluminium calcium phosphate CHILE – NO	Maximum 90 mg/kg P ₂ O ₅ . Use limited to basic soils (pH > 7.5)
Trace elements (e.g. boron, copper, iron, manganese, molybdenum, zinc)	Need recognized by the certification body or authority.
Sulphur	Need recognized by the certification body or authority.
Stone meal	----
Clay (e.g. bentonite, perlite, zeolite)	----
Naturally occurring biological organisms (e.g. worms)	----
Vermiculite	----
Peat	Excluding synthetic additives; permitted for seed, potting module composts. Other use as recognized by certification body or authority. Forbid as soil

CHILE – NO	conditioner due to exhaustion of the resource.	
Humus from earthworms and insects	----	
Zeolites	----	
Wood charcoal	Only charcoal from wood not treated chemically. ----	
SWITZERLAND – NO		
Chloride of lime	Need recognized by the certification body or authority	
Human excrements	Need recognized by the certification body or authority. If possible aerated or composted. Not applied to crops intended for human consumption. Forbid use due to cultural reasons.	
CHILE – NO		
By-products of the sugar industry (e.g. Vinasse)	Need recognized by the certification body or authority	
By-products from oil palm, coconut and cocoa (including empty fruit bunch, palm oil mill effluent (pome), cocoa peat and empty cocoa pods)	Need recognized by the certification body or authority	
By-products of industries processing ingredients from organic agriculture	Need recognized by the certification body or authority	
Calcium chloride solution	Leaf treatment in case of proven calcium deficiency.	
SWITZERLAND - NO		
Plant extracts and preparations such as infusions and tea.	-----	
SWITZERLAND - NO		
Biodynamic preparations	-----	
SWITZERLAND – NO		
Substrata	Peat percentage max. 70% vol.	
SWITZERLAND – NO		

TABLE 2: SUBSTANCES FOR PLANT PEST AND DISEASE CONTROL

Substance	Description; compositional requirements; conditions for use
<i>I. Plant and Animal</i>	
Preparations on basis of pyrethrins extracted from <i>Chrysanthemum cinerariaefolium</i> , containing possibly a synergist IFOAM - YES	Need recognized by the certification body or authority. Exclusion of Piperonylbutoxide after 2005 as a synergist.
Preparations of Rotenone from <i>Derris elliptica</i> , <i>Lonchocarpus</i> , <i>Thephrosia spp.</i>	Need recognized by the certification body or authority.
Preparations from <i>Quassia amara</i>	Need recognized by the certification body or authority.
Preparations from <i>Ryania speciosa</i>	Need recognized by the certification body or authority.
Preparations of Neem (Azadirachtin) from <i>Azadirachta indica</i>	Need recognized by the certification body or authority.
Propolis	Need recognized by the certification body or authority.
Plant and animal oils	---
Seaweed, seaweed meal, seaweed extracts, sea salts and salty water SWITZERLAND – NO	Not chemically treated. Conditions for use must be specified.
Gelatine	---
Lecithin SWITZERLAND – NO	Need recognized by the certification body or authority. Not from genetically modified organisms.
Casein	---
Natural acids (e.g. vinegar)	Need recognized by the certification body or authority.

Fermented product from Aspergillus	---
Extract from mushroom (Shiitake fungus)	---
Extract from Chlorella	---
Chitin nematicides. IFOAM - YES	Natural origin.
Natural plants preparations, excluding tobacco	Need recognized by certification body or authority..
Tobacco tea (except pure nicotine)	Need recognized by certification body or authority.
Sabidilla IFOAM - YES	---
Repellents of plants and animal origin SWITZERLAND – NO	---
Natural enemies such as e.g., parasitical hymenoptera, predatory mites, redviids, gall midges, ladybirds, nematoda SWITZERLAND – NO	---
Plant waxes and oils SWITZERLAND – NO	---
Beeswax SWITZERLAND – NO	---
II. Mineral	
<p>Inorganic compounds (Bordeaux mixture, copper hydroxide, copper oxychloride) CHILE – NO</p> <p>Replace the above entry with the following:</p> <p>Copper in the form of copper hydroxide, copper oxychloride, (tribasic) copper sulphate, cuprous oxide, Bordeaux mixture and Burgundy mixture</p> <p>EC - Justification, see opposite.</p>	<p>Need recognized by certification body or authority. As a fungicide at the max. rate of 8kg of copper per hectare per year on condition that the substance be used in such a way as to minimize copper accumulation in the soil. Must not be used as a herbicide.</p> <p>Fungicide.</p> <p>Until 31 December 2003 up to a maximum of 8kg copper per hectare per year, and from 1 January 2006 up to 6kg copper per ha per year, without prejudice to a more limited quantity if laid down under the specific terms of the general legislation on plant protection products in the country where the product is to be used.</p> <p>For perennial crops, countries may, by derogation to the previous paragraph, provide that the maximum levels apply as follows:</p>

	<ul style="list-style-type: none"> - the total maximum quantity used from 23 March 2002 until 31 December 2006 shall not exceed 38 kg copper per ha; - from 1 January 2007, the maximum quantity which may be used each year per ha shall be calculated by subtracting the quantities actually used in the 4 preceding years from, respectively, 36, 34, 32 and 30 kg copper for the years 2007, 2008, 2009 and 2010 and following years. <p>Need recognized by the inspection body or inspection authority.</p> <p><i>Comment: In order to avoid a harmful impact on the balance of the soil and water ecosystems.</i></p>
Burgundy mixture	Need recognized by certification body or authority.
Copper salts	Need recognized by certification body or authority.
IFOAM - YES	Max. 8kg/ha per year (on rolling basis).
Sulphur	Need recognized by certification body or authority.
Mineral powders (stone meal, silicates)	---
Diatomaceous earth	Need recognized by certification body or authority.
Silicates, clay (Bentonite)	---
Sodium silicate	---
Sodium bicarbonate	---
Potassium permanganate	Need recognized by certification body or authority.
Iron phosphates IFOAM - YES	As molluscicide
Paraffin oil	Need recognized by certification body or authority.
Mineral oils SWITZERLAND – NO	Only in exceptional cases such as e.g., an attack of San-Jose louse.
III. Micro organisms used for biological pest controls	

Micro-organisms (bacteria, viruses, fungi) e.g. Bacillus -thuringiensis, Granulosis virus, etc. CHILE – NO	Need recognized by certification body or authority. Not genetically modified products only.
IV. Other	
Carbon dioxide and nitrogen gas	Need recognized by certification body or authority.
Potassium soap (soft soap)	---
Ethyl alcohol	Need recognized by certification body or authority.
Homeopathic and Ayurvedic preparations	--
Herbal and biodynamic preparations	---
Sterilized insect males	Need recognized by certification body or authority
Rodenticides SWITZERLAND – NO	Products for pest or disease control in livestock buildings and installations.
V. Traps	
Pheromone preparations	---
Preparations on the basis of metaldehyde containing a repellent to higher animal species and as far as applied in traps. CHILE - NO	Need recognized by certification body or authority only until March 31st 2006.
Mineral oils CHILE – NO	Need recognized by the certification body or authority. Without synthetic pesticides, insecticide, fungicide; only for fruit trees, grapevines, olive trees and tropical crops.
Mechanical control devices such as e.g., crop protection nets, spiral barriers, glue-coated plastic traps, sticky bands SWITZERLAND – NO	---

**TABLE 3: INGREDIENTS OF NON AGRICULTURAL ORIGIN REFERRED TO
IN SECTION 3 OF THESE GUIDELINES**

3.1 Food additives, including carriers

INS	Name	Specific conditions
	<u>For plant products</u>	
170	Calcium carbonates	----
220	Sulfur dioxide	Wine products
270	Lactic acid	Fermented vegetable products
290	Carbon dioxide	----
296	Malic acid	----
300	Ascorbic acid	If not available in natural form
306	Tocopherols, mixed natural concentrates	----
322	Lecithin	Obtained without the use of bleaches and organic solvents
330	Citric acid	Fruit and vegetable products
335	Sodium tartrate	Cakes/confectionery
333	Calcium citrate SWITZERLAND – NO EC - IN PART IFOAM	Acid regulator, stabiliser, dispersing agent, antioxidant <i>Comment: Indispensable for the preparation of certain food products.</i> <i>IFOAM has listed this substance for plant products - see matrix.</i>
334	Tartaric acid SWITZERLAND - NO EC - IN PART IFOAM Secretariat comment	--- <i>Comment: Indispensable for the preparation of certain food products.</i> <i>IFOAM listed only for preparation of wine. Doesn't support the proposal.</i> <i>Codex lists as: acidity regulator, sequestrant, antioxidant synergist.</i>
336	Potassium tartrate	cereals/cakes/confectionery

341i	Mono calcium phosphate	only for raising flour
400	Alginic acid	----
401	Sodium alginate	----
402	Potassium alginate	----
406	Agar	----
407	Carageenan	----
410	Locust bean gum	----
412	Guar gum	----
413	Tragacanth gum	----
414	Arabic gum	Milk, fat and confectionary products
415	Xanthan gum	Fat products, fruit and vegetables, cakes & biscuits, salads.
416	Karaya gum	----
440	Pectins	----
422	Glycerol EC - IN PART IFOAM <i>Secretariat comment</i>	For plant extracts <i>Comment: Indispensable for the preparation of certain food products.</i> Not listed this substance - don't support proposal. <i>Codex listing as: humectant, bodying agent.</i>
500	Sodium carbonates	Cakes & biscuits, confectionery
501	Potassium carbonates	Cereals/cakes & biscuits/confectionary
503	Ammonium carbonates	----
504	Magnesium carbonates	----
508	Potassium chloride	Frozen fruit and vegetables/canned fruit and vegetables, vegetable sauces/ketchup and mustard
509	Calcium chloride	Milk products/fat products/fruits and vegetables/soybean products
511	Magnesium chloride	Soy bean products
516	Calcium sulphate	Cakes & biscuits/soy bean products/bakers yeast. Carrier

524	Sodium hydroxide	Cereal products
551	Silicon dioxide EC - IN PART IFOAM	Anti-caking agent for herbs and spices <i>Comment: Indispensable for the preparation of certain food products</i> No need to add to the list of additives..
938	Argon	----
551	Silicon dioxide SWITZERLAND – NO	Anti-caking agent for herbs and spices
941	Nitrogen	----
948	Oxygen	----

3.2 Flavourings

Substances and products labelled as natural flavouring substances or natural flavouring preparations as defined in Codex Alimentarius 1A - 1995, Section 5.7.

3.3 Water and salts

Drinking water.

Salts (with sodium chloride or potassium chloride as basic components generally used in food processing).

3.4 Preparations of Microorganisms and Enzymes

(a) Any preparations of microorganisms and enzymes normally used in food processing, with the exception of microorganisms genetically engineered/ modified or enzymes derived from genetic engineering.

3.5 Minerals (including trace elements), vitamins, essential fatty and amino acids, and other nitrogen compounds. Only approved in so far as their use is legally required in the food products in which they are incorporated.

For livestock and bee products *Comment: Relocate at end of Table 3.1 (EC)*

The following is a provisional list for the purposes of processing livestock and bee products only. Countries may develop a list of substances for national purposes that satisfy the requirements of these Guidelines as recommended in Section 5.2.

153	Wood Ash DENMARK – NO IFOAM	Traditional cheeses List the specific cheeses. Only for specific cheese varieties.	COMMENTS IDF: supports retention of wood ash. Secretariat proposal: <i>Specified traditional cheeses as recognized by the certification body or authority</i> .
170	Calcium carbonates	Milk products. Not as colouring agent.	

250	Sodium nitrate SWITZERLAND – NO	Pickling salt for meat products except sausages for frying, minced meat products, products made of fish, crustaceans and molluscs. <i>Comment: To increase food safety (C.botulinum) and change the colour. Certain meat products are only acceptable by the consumer if they have a red colour.</i>	Denmark: Cannot accept the inclusion of nitrite and nitrate for meat products. Nitrate slowly converts into nitrite which can lead to formation of nitrosamines in meat products. These are known to be carcinogenic and no safe level can be established so use should be as low as possible. This kind of substance should not be allowed in organic food. Many kinds of organic meat products can be produced without nitrite and nitrate using GHP and when it comes to securing the image of organic food it is acceptable that they have a different colour and a shorter shelf life. Colour is not an acceptable reason for allowance as this is not part of the justification even for nitrate and nitrite for conventional products. IFOAM: has not listed these substances, see matrix.
251	Sodium nitrate SWITZERLAND – NO	Raw pickled products and raw cured meat products. <i>Comment: To increase food safety (C.botulinum) and change the colour. Certain meat products are only acceptable by the consumer if they have a red colour.</i>	
252	Potassium nitrate SWITZERLAND – NO	Raw pickled products and raw cured meat products. <i>Comment: To increase food safety (C.botulinum) and change the colour. Certain meat products are only acceptable by the consumer if they have a red colour.</i>	
270	Lactic acid	Sausage casings	
290	Carbon dioxide	---	
300	Ascorbic acid IFOAM - YES	As an antioxidant. From natural sources when available.	Denmark: Conditions of envisage use is missing; what products and how will non use affect shelf life of product. IFOAM: Ascorbic acid is used to protect the foods against oxidative effects. In mixed products this leads to better keeping time. This is the result of the intoxicative effect, that protect colour, taste and sensory properties in general. Concrete results are strongly related to the type of food. Codex accepts these substances for plant products. The substances have the same effects in terms of use as intoxicative in animal or mixed products.
301	Sodium ascorbate SWITZERLAND – NO	In meat products, provided insufficient natural sources are available.	
302	Calcium ascorbate SWITZERLAND – NO	In meat products, provided insufficient natural sources are available.	
303	Potassium ascorbate SWITZERLAND – NO	In meat products, provided insufficient natural sources are available.	
			Korea: Not in favour of this addition because fruits and vegetables are rich

			sources of potassium.
<p><i>IFOAM Comment: Na-, Ca-, K- Ascorbate: Only Sodium Ascorbate is needed for the proposed usage which only makes sense if nitrite or nitrate are allowed. Use of Sodium Ascorbate reduces the level of nitrite if added to the product. Propose only permitting Sodium Ascorbate in combination with Nitrite or Nitrate, if these substances are accepted. IFOAM does not accept Nitrite or Nitrate, therefore has not listed ascorbates.</i></p>			
306	Tocopherols, mixed natural concentrates IFOAM - YES	As an antioxidant in mixed products to prevent fat oxidation.	Denmark: Might be a need in baby foods, but need more detailed description of technical use and what happens with, eg, shelf life if not allowed.
<p><i>IFOAM Comment: These substances are used to protect the foods against oxidative effects. The application of these substances in mixed products (eg fruits/milk or vegetable/meat) leads to a better keeping time. This is the result of the intoxicative effect, which protects the colour, the taste and the sensory properties in general. The concrete results are strongly related to the type of food. Codex accepted these substances for plant products. The substances have the same effects in terms of intoxicative in animal or mixed products.</i></p>			
322	Lecithin	Obtained without the use of bleaches or organic solvents. Milk products/milk based infant food/fat products/mayonnaise.	
327	Calcium lactate IDF - YES	Stabilizer. for thickening pasteurised milk and cream products.	
330	Citric acid IFOAM - YES	As coagulation agent for specific cheese products and for cocked eggs.	Denmark: Detailed description and conditions of use mission. Citric acid is suggested as PA but no description as such is mentioned. IDF: Supports inclusions of citric acid.
<p><i>Comment: IFOAM - The typical mascarpone products must be made with citric acid as coagulation agent (justification on pH 5.8). If it is not done like that we have no mascarpone. So we have to decide if we want to have mascarpone or not. Citric acid is also used by the preparation of cocked eggs to prevent oxidation of the surface of the product.</i></p>			
331	Sodium citrate IFOAM - YES IDF - YES	Sausages/pasteurisation of egg whites/milk products emulsified sausage and melted cheese Stabiliser for thickening pasteurised milk and cream products; and emulsifying salt for processed cheese.	
332	Potassium citrate SWITZERLAND – NO		IFOAM: has listed this substance for processing of organic food in general. IDF supports inclusion of potassium citrate.
333	Calcium citrate	Stabilizer for thickening of pasteurized milk and cream	

	IFOAM - YES	products and pasteurized cream.	
339	Sodium phosphate IDF - YES	Stabilizer for pasteurised milk and cream products and stabilizer for pasteurised creams.	
340	Potassium phosphate IDF - YES	Emulsifying salt for melted and processed cheese and stabilizer for pasteurised creams.	
400	Alginic acid IFOAM - YES	As a thickener for milk based and mixed products.	IDF supports proposal.
401	Sodium alginate IFOAM - YES	As a thickener for milk based and mixed products	
402	Potassium alginate IFOAM - YES	As a thickener for milk based and mixed products.	IDF supports proposal.
406	Agar	---	
407	Carrageenan	Milk products	
410	Locust bean gum	Milk products/meat products	
412	Guar gum	Milk products/canned meat/egg products	
413	Traganth gum	---	
414	Arabic gum IFOAM - YES	Milk products/eggs as a lasing agent/fat/confectionery	IDF supports proposals.
440	Pectin (unmodified)	Milk products	
450	Diphosphates IDF - YES	Emulsifying salt for melted and processed cheese and stabilizer for pasteurised creams.	
452	Polyphosphate IDF - YESs	Emulsifying salt for meltd and processed cheese and stabilizer for pasteurised creams.	
500	Sodium carbonates	Milk products for pH regulation in traditional cheese varieties prepared out of sour milk.	Denmark: Technological need and what happens if not allowed is not described. Specific type of cheese should be mentioned. DK cannot support the inclusion on this substance as additive or PA.

<p><i>Comment: IFOAM. If a milk product is strongly treated with heat, eg condensed milk, then the proteins tend to coagulate to a higher pH. Therefore, Sodium carbonates will be added to make the pH higher in the milk with the aim of preventing coagulation of proteins. Further, these products are so called "sour milk cheese". It is produced out of milk with 1.55 fat and is coagulated only by the help of lactic acid bacteria. The Sodium carbonate is used during the ripening process to reduce the acids in the product to a level of pH 4.8 - 4.9. It is used normally between 0.5-1% in relation to the raw cheese material. If Sodium carbonate are not used, the pH of the products will be too low and the taste too sour for human consumption.</i></p>			
509	Calcium Chloride	Milk products/meat products	
938	Argon	---	
941	Nitrogen	---	
942	Nitrous Oxide IDF - YES	Packaging gas, propellant for whipped cream.	
948	Oxygen	---	
---	Corn starch IDF - YES	Thickener for flavoured and heat treated fermented milks.	

TABLE 4: PROCESSING AIDS WHICH MAY BE USED FOR THE PREPARATION OF PRODUCTS OF AGRICULTURAL ORIGIN REFERRED TO IN SECTION 3 OF THESE GUIDELINES

Substance	Specific conditions
<u>For plant products</u>	
Water	----
Calcium chloride	coagulation agent
Calcium carbonate	----
Calcium hydroxide	----
Calcium sulphate	coagulation agent
Magnesium chloride (or nigari)	coagulation agent
Potassium carbonate	drying of grape raisins
Carbon dioxide	----
Nitrogen	----
Ethanol	Solvent
Tannic acid	filtration aid

Egg white albumin	----
Casein	----
Gelatine	----
Isinglass	----
Vegetable oils	greasing or releasing agent
Silicon dioxide	as gel or colloidal solution
Activated carbon	----
Talc	----
Bentonite	----
Kaolin	----
Diatomaceous earth	----
Perlite	----
Hazelnut shells	----
Beeswax	releasing agent
Carnauba wax	releasing agent
Sulphuric acid	PH adjustment of extraction water in sugar production
Sodium hydroxide EC IFOAM	pH adjustment in sugar production Oil production for rape seed (<i>Brassica spp</i>) <i>Comment: Indispensable for the preparation of certain food products.</i> <i>Comment: No need to allow for rape oil processing. Alternatives are available.</i>
Tartaric acid and salts	----
Sodium carbonate	sugar production
Preparations of bark components	----

Potassium hydroxide	pH adjustment for sugar processing
Citric Acid EC <i>IFOAM: agrees with comment</i>	pH adjustment Oil production and hydrolysis of starch <i>Comment: Indispensable for the preparation of certain food products.</i>

Preparations of microorganisms and enzymes

Any preparations of microorganisms and enzymes normally used as processing aids in food processing, with the exception of genetically engineered/modified organisms and enzymes derived from genetically engineered/modified organisms.

For livestock and bee products <i>Comment: Relocate at end of Table 4 (EC)</i>	
The following is a provisional list for the purposes of processing livestock and bee products only. Countries may develop a list of substances for national purposes that satisfy the requirements of these Guidelines as recommended in Section 5.2.	
Calcium carbonates	---
Calcium Chloride	Firming, coagulation agent in cheese making.
Kaolin	Extraction of propolis.
Lactic acid DENMARK – NO <i>Secretariat proposal: Listed as an additive and a processing aid, although Codex does not list as p.a..</i>	Milk products: coagulation agent, pH regulation of salt bath for cheese. <i>Comment: Mentioned uses are additives and, if necessary, should be placed in Table 3.</i> <i>Listed by Codex as a food additive: ‘acidity regulator’. (Codex Stan 192-1995 Rev 2-1999.</i> <i>IFOAM: Above comment is correct: However, LA may be used not directly in the product but in the salt bath in which the product has to rest only a short time. This means that in relation to the product LA is a processing aid.)</i> IDF: Supports inclusion of lactic acid.
Sodium carbonate DENMARK – NO	Milk products: neutralizing substance. Comment: Not indispensable as neutralizing substance for milk products. Mentioned use is an additive. Listed by Codex as a food additive: ‘acidity regulator, raising agent, anticaking agent’. (Codex Stan 192-1995 Rev 2-1999) IFOAM and IDF support retaining this substance.
Water	---

GUIDELINES FOR THE PRODUCTION, PROCESSING, MARKETING AND LABELLING OF ORGANICALLY PRODUCED FOODS
PROPOSED DRAFT AMENDMENTS TO ANNEX 2 – PERMITTED SUBSTANCES
EVALUATION AGAINST CRITERIA

SCORING:	++ very positive	+ positive	oo not to evaluate	- rather negative	-- very negative
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Table 1: Substances for Use in Soil Fertilizing and Conditioning

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production			
	substance is necessary/essential for its intended use			
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment			
	lowest negative impact on human or animal health and quality of life			
	approved alternatives not available			
Section 5.1(a) Used for fertilization, soil conditioning	essential for obtaining or maintaining fertility of the soil or fulfil specific nutrition requirements of crops, soil-conditioning and rotation purposes			

	ingredients are of plant, animal, microbial, or mineral origin; may undergo physical, enzymatic or microbial processes		
	use does not have harmful impact on soil organisms or physical characteristic of soil.		
	use restricted to specific conditions, regions or commodities		

Table 2: Substances for Plant Pest and Disease Control - Additional proposed substances

PROPOSED SUBSTANCE: **IRON III ORTHOPHOSPHATE. IRONPHOSPHATES AS MOLLUSCICIDE**

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes, it is a product which can be found in nature	++	IFOAM
	substance is necessary/essential for its intended use	Slugs attack a large number of agricultural and horticultural crops; in general vegetables are most affected. Agricultural practices such as reduced soil cultivation, green manuring, field margins and set aside favour slugs, and slug problems are therefore expected to aggravate in the future. Currently, there is no effective method for slug control which can be used in organic agriculture. Thus, slugs are one of the great, unsolved problems for organic farmers and particularly vegetable growers.	++	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative impact is known from the manufacture process.	+	

	lowest negative impact on human or animal health and quality of life	Iron phosphate is harmless to mammals (LD ₅₀ (rat, oral) >5000 mg/kg; FDA rating GRAS ("Generally Recognized as Safe"). It has been added to bread dough to increase iron content.	++	
	approved alternatives not available	No effective, approved alternatives available, the use of nematodes is limited to a few specific species which have a very limited life-span.	++	
Section 5.1(b) Used for Plant Disease or Pest and Weed Control	essential for the control of a harmful organism or particular disease for which other biological, physical or plant breeding alternatives and/or effective management practices are not available	Yes, in some wet climate and areas the preventive methods are not sufficient.	++	IFOAM
	[use should take into account potential harmful impact on the environment, ecology and health of consumers, livestock and bees]	Pellets containing iron phosphate are apparently harmless for earthworms and Carabide beetles. Pellets decay within a few weeks after application, thus releasing approximately 0.2 kg/ha Fe and 0.15 kg/ha P ₂ O ₅ . This is equivalent to ca 0.3 % of the P needs of lettuce (there are no figures for Fe needs). This is negligible in comparison to the inputs with fertilizers.	+	
	undergo physical, enzymatic or microbial process	Only physical process	+	
	products used, in exceptional circumstances in traps and dispensers, which are chemically synthesized if other products are not available provided use does not result in residue in the edible part	Does not apply	00	
	use restricted to specific conditions, regions or commodities	No specific restrictions for organic farming which are above the legal requirements	+	

PROPOSED SUBSTANCE: Copper salts. Limitation of use to max 8kg/ha per year (on rolling average)

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Copper salts occur in nature and copper is an essential nutrient	++	IFOAM
	substance is necessary/essential for its intended use	For certain plant diseases, there are no effective alternatives.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Copper mining. Copper is not biodegradable and accumulates. Long-term use needs to be restricted to protect the soil from such accumulation. Mining may generate large amounts of arsenic. Smelting produces sulphur emissions that cause acid rain.		
	Lowest negative impact on human or animal health and quality of life	Generally non-toxic when properly used.	+	
	approved alternatives not available	While some progress is being made on biological alternatives such as antagonists and classical plant breeding for resistance, some plant diseases do not have any approved alternatives available.	+	
Section 5.1(b) Used for Plant Disease or Pest and Weed Control	essential for the control of a harmful organism or particular disease for which other biological, physical or plant breeding alternatives and/or effective management practices are not available	Essential for the control of certain bacterial and fungal diseases, such as various blights and mildews.	++	
	[use should take into account potential harmful impact on the environment, ecology and health of consumers, livestock and bees]	Long-term build-up of copper in the soil will be toxic to plants and earthworms. Toxic to fish and other aquatic organisms.	-	
	undergo physical, enzymatic or microbial process	Copper ore is smelted and then processed into copper oxide. This can be reacted with sulphuric acid to produce copper sulphate, sodium hydroxide to produce copper hydroxide, or hydrochloric acid to produce copper oxychloride.	-	

products used in traps and dispensers which are chemically synthesized if other products are not available provided use does not result in residue in the edible part	Generally not used in traps. May result in residues on edible parts, particularly in vegetables such as celery treated for late blight and spinach treated for downy mildew.	-	
use restricted to specific conditions, regions or commodities	Annual application rates and total loading rates need to be restricted to protect the environment. Use on edible vegetable parts may also need to be restricted.	-	

PROPOSED SUBSTANCE:

IRON PHOSPHATES AS MOLLUSCICIDE

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Iron phosphate occurs in nature, is non-toxic and degrades into essential nutrients.	++	IFOAM
	substance is necessary/essential for its intended use	Slugs and snails are a widespread problem. While there are some non-chemical alternatives, many organic farmers need a least-toxic molluscicide to reduce populations.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Occurs in nature; synthetic form is nature identical. Adequately pure sources do not pose a problem with heavy metals.	+	
	lowest negative impact on human or animal health and quality of life	Iron phosphate appears to be the least toxic chemical control for molluscs.	++	
	approved alternatives not available	There are some cultural and biological alternatives, but the efficacy varies according to climate, target pest, and cropping system.	+	

Section 5.1(b) Used for Plant Disease or Pest and Weed Control	essential for the control of a harmful organism or particular disease for which other biological, physical or plant breeding alternatives and/or effective management practices are not available	Molluscs are vectors of human parasites in certain parts of the world. In many places they are very destructive to food crops. While a number of cultural and biological practices can help reduce mollusc damage, certain organic practices such as growing green manures and mulching may make the problem worse.	+	
	[use should take into account potential harmful impact on the environment, ecology and health of consumers, livestock and bees]	Iron is an essential nutrient. Generally non-toxic; safe for livestock and wildlife. Iron phosphate is approved as a nutritional supplement for food. While long-term build-up may be toxic in low pH soils already high in iron, plants and animals have a high tolerance for iron. Bees are not exposed.	+	
	undergo physical, enzymatic or microbial process	Most commercial sources are produced by the reaction of steel manufacturing by-product with phosphoric acid. Usually combined with chelating agents, such as ethylene diamine tetra-acetic acid (EDTA).	-	
	products used, in exceptional circumstances in traps and dispensers, which are chemically synthesized if other products are not available provided use does not result in residue in the edible part	Baits are applied to soil and are not intentionally applied directly to the edible parts of plants.	++	
	use restricted to specific conditions, regions or commodities	Not for use as a phosphate fertilizer unless from a mined source.	+	

PROPOSED SUBSTANCE:

CHITIN NEMATOCIDES (NATURAL ORIGIN)

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Natural origin: derived from crab shells, oyster shells or other aquatic animals. Non-toxic.	++	IFOAM
	substance is necessary/essential for its intended use	Nematodes can cause extensive damage.	+	

	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Made from crab shells, oyster shells. Some manufacturing processes use sulphuric acid, potassium hydroxide, and urea.	+	
	lowest negative impact on human or animal health and quality of life	Beneficial for many soil organisms. No negative impact on human health, livestock, or wildlife.	+	
	approved alternatives not available	Compost, diatomaceous earth, beneficial organisms, neem cake. It is more effective and a viable substitute for methyl bromide and other chemical nematicides.	++	
Section 5.1(b) Used for Plant Disease or Pest and Weed Control	essential for the control of a harmful organism or particular disease for which other biological, physical or plant breeding alternatives and/or effective management practices are not available	Used to control plant nematodes where biological, physical or plant breeding alternatives and the above alternatives are not effective.	+	
	[use should take into account potential harmful impact on the environment, ecology and health of consumers, livestock and bees]	Beneficial to the environment in that it provides a way to recycle wastes from the seafood industry. Consumers are not exposed to any residues. Not harmful to livestock or bees.	+	
	undergo physical, enzymatic or microbial process	Some products are treated with strong acids and bases - in particular hydrochloric acid and potassium hydroxide. One theory of the mode of action is that this stimulates the growth of micro organisms that produce chitinase.	+	
	products used, in exceptional circumstances in traps and dispensers, which are chemically synthesized if other products are not available provided use does not result in residue in the edible part	Not applicable.		
	use restricted to specific conditions, regions or commodities	Mechanically processed without the addition of synthetic chemical treatments.	+	

PROPOSED SUBSTANCE:**SABADILLA**

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Safely used in many sustainable systems for hundreds of years as a natural form of pest control.	+	IFOAM
	substance is necessary/essential for its intended use	Necessary and essential in some regions for the management of insect pests of the orders Anoplura (lice), Hemiptera (true bugs), Orthoptera (grasshoppers), Thysanoptera (thrips). Often the least toxic available natural control for certain target pests.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	From the dried ripe seeds of <i>Schoenocaulon officinale</i> , a relative of the lily, native to northern Sth America. Mixed with sulphur, lime, or diatomaceous earth and applied as a dust, or sprayed in a kerosene solution. Use according to instructions is not harmful to the environment. A natural product, it is fully and quickly biodegradable.	+	
	lowest negative impact on human or animal health and quality of life	Highly selective, even within the same family of insects. Effectively toxic to only a small number of pest insects. Non-toxic to most beneficial organisms. Accidental exposure causes irritation.	+	
	approved alternatives not available	Non-toxic alternatives exist but are not always effective. Less toxic than other approved alternatives such as rotenone. Some other alternatives may not be locally available because of resistance. Also, because the mode of action is different, it is useful to manage insect resistance to <i>Bacillus thuringiensis</i> , pyrethrum, and other approved treatments.	-	
Section 5.1(b) Used for Plant Disease or Pest and Weed Control	essential for the control of a harmful organism or particular disease for which other biological, physical or plant breeding alternatives and/or effective management practices are not available	Locally essential for the treatment of insects in the Orders Anoplura, Hemiptera, and Thysanoptera when biological, physical or plant breeding alternatives and other management practices fail.	++	

[use should take into account potential harmful impact on the environment, ecology and health of consumers, livestock and bees]	Consists of about 0.3% alkaloids, of which crystalline veratrine (cevadine) and veratraidine are the chief members. Historically used as a medicinal herb in Sth/Central America. LD50 (ip, mouse): 7.5 mg/kg. Exposure to consumers is not much of an issue. Poisoning of applicators is rare, but has been know to happen. No record of toxicity to bees.	-	
undergo physical, enzymatic or microbial process	Physically processed by crushing. Some products may then be combined with petroleum solvents.		
products used, in exceptional circumstances in traps and dispensers, which are chemically synthesized if other products are not available provided use does not result in residue in the edible part	May be used in various traps as an alternative to carbonates and organophosphates. These uses will not result in residue in the edible part.	+	
use restricted to specific conditions, regions or commodities	Because it is narrow-spectrum, locally produced, and limited to certain regions, sabadilla use is self-limiting.	+	

Table 3: Ingredients of Non Agricultural Origin Referred to in Section 3 of the Guidelines - for Livestock and Bee Products

PROPOSED SUBSTANCE: **Ascorbic acid as additive (INS 300)**

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes, it is a substance found in nature.	+	IFOAM
	substance is necessary/essential for its intended use	Yes, see 5.1c.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Yes (it has to be used in natural form if available), normally from traditional biotechnology/ no negative effects are reported.	+	

	lowest negative impact on human or animal health and quality of life	Yes, ADI not limited (not specified by JECFA).	++
	approved alternatives not available	There are natural sources available but they are not appropriate for all kind of products because of sensorial reasons	-
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Is needed as antioxidants in the production of several mixed products and sausages.	+
	undergo mechanical/physical, biological/enzymatic or microbial processes	Yes, it is a product produced from starch with the help of micro organisms.	+
	undergo chemical synthesis if alternative substances/technologies not available	No (synthetic ascorbic acids have to be excluded).	-
	use maintains authenticity of the product	Yes, it works as a antioxidants that means degradation processes are stopped.	+
	[does not detract from the overall quality]	No information are available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	+ (0)

Comments:

Denmark: Conditions of envisaged use missing.

PROPOSED SUBSTANCE: Tocopherols – mixed natural concentrates as additives (INS 306)

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes, it is of natural origin and often found in nature.	++	IFOAM
	substance is necessary/essential for its intended use	Yes, see 5.1c.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Yes. By-product of the food oil industry. No negative effects are reported	++	
	lowest negative impact on human or animal health and quality of life	Yes. ADI 0,15- 0,2 mg/kg/d.	+	
	approved alternatives not available	Yes. It's the most natural substance for this usage.	+	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Is needed as antioxidants the production of several mixed products for example baby foods and sausages	+	
	undergo mechanical/physical, biological/enzymatic or microbial processes	Yes// It's produced out of plant oil by simple separation processes	+	
	undergo chemical synthesis if alternative substances/technologies not available	No	++	
	use maintains authenticity of the product	Yes// It works as a antioxidants that means degradation processes are stopped	+	
	[does not detract from the overall quality]	No information are available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact	+ (0)	

Comments:

Denmark: There might be a need in baby foods, but we need a more detailed description of the technical use and what happens with, e.g., shelf life if it is not allowed.

PROPOSED SUBSTANCE:

- Citric acid as PA and as additive (INS 330)
- Sodium citrates as additive (INS 331)

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes. The substance is often present in nature.	+	IFOAM Supported by IDF
	substance is necessary/essential for its intended use	Yes, see 5.1c.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Yes. Produced by traditional biotechnological methods. No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes. ADI not specified Not specified by JECFA. (IDF).	++	
	approved alternatives not available	Yes. The most natural and available substance for this usage None available. (IDF).	++	

<p>Section 5.1 (c)</p> <p>Used as additives or processing aids in the production/preservation of food</p>	<p>[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]</p>	<p>Citrate and Sodium citrates are needed as emulsifying salt for sausages and as coagulation agent for cheese products. Also needed for the production of egg products.</p> <p>Stabilizer and neutralizing buffer salt used for milk and cream and processed cheese products subject to heat treatment (pasteurisation) needed to avoid precipitation of milk proteins or separation of milkfat. (IDF)</p>	++
	<p>undergo mechanical/physical, biological/enzymatic or microbial processes</p>	<p>Yes. It is produced out of starch with the help of micro organisms. Origin is calcium and Sodium salt. (IDF)</p>	+
	<p>undergo chemical synthesis if alternative substances/technologies not available</p>	<p>No.</p>	+
	<p>use maintains authenticity of the product</p>	<p>Yes. It will be used for the production of new types of products derived from livestock products and in a way that it does not influence the authenticity of the product.</p> <p>Yes, needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurisation. Does not influence the authenticity of the product. (IDF)</p>	+
	<p>[does not detract from the overall quality]</p>	<p>No information is available which demonstrate a negative impact on overall quality of product. However, some of the possible products must be understood as products with a low overall quality profile.</p> <p>The chemical structure and the reaction within the food do not suggest a negative impact. (IDF)</p>	-

Comments:

Denmark: Detailed description and conditions of their use is missing.

Citric acid is suggested as PA which is probably as processing aid, but no description as such as mentioned.

IFOAM Fact sheet Citric acid as processing aid /January 2003

Substance (E – number):	Citric acid E 330
Usage:	Acidity regulator, acid, colour stabilizer, antioxidants
Origin:	Processed out of sugar rich crops fermented by <i>Aspergillus niger</i> varieties
Toxicology:	It is used completely by the human body (3/kcal/g)
Proposed usage:	For all animal products.
Possible restrictions:	Could be restricted to product groups or to specific traditional products. E.g. milk products e.g. cheese

ARGUMENTS IN FAVOUR

- Citric acid is a simple organic acid (in the chemical sense) which is produced out of natural substances.
- For plant products it is already allowed.
- Could be used for sausages, egg products and milk products as acids or acidity regulators. Citric acids are used for several typical cheeses as coagulation agents
- Organic acids from e.g. lemon or vinegar are expensive and have a taste which doesn't meet the expectations of the consumers

ARGUMENTS AGAINST

- In sausages and milk products natural fermentation processes should be preferred. They lead to a better taste and to the production of a lot of other secondary substances which contribute positively to the consumers health.
- Organic lemon juice (also concentrated) or vinegar (different concentrations) or other sour foods can or should be used as acids in organic foods. It's practice to do so in different certified organic foods!
- The natural ripening by micro-organisms is in line with the philosophy of an integrated processing of organic foods.

DESCRIPTION OF THE DISCUSSION PROCESS

For a long time there has been a discussion about how to deal with organic acids. It's caused mainly by the fact that there are different organic sour foods available, which can be used instead of mono-products like citric acids. For example, it leads to the situation that a lot of juice producers use lemon juice in concentrated form, or in bakeries the accerola cherry or sea buckhorn are used instead of ascorbic acid. So you will find standards which allow this acid and another ones which forbids the purified organic acids or allow it only for a specific usage.

PROPOSED SUBSTANCE:

- **Alginic acid as additive (INS 400)**
- **Sodium alginate as additive (INS 401)**
- **Potassium alginate as additive (INS 402)**

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes. Substance is of natural origin	++	IFOAM
	substance is necessary/essential for its intended use	Yes see 5.1.c	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Yes. Its produced out of seaweed; no negative effects are reported	++	
	lowest negative impact on human or animal health and quality of life	Yes. ADI not specified (negative influence on the reabsorption of Ca. Fe.	0	
	approved alternatives not available	- All thickeners has similar functional properties. But for specific sensorial and technological reasons each thickener is more or less appropriate for different products. Alginates for example is very well suitable for ice cream.	0	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Its needed as thickener for mixed products, milk products and especially for ice cream.	+	
	undergo mechanical/physical, biological/enzymatic or microbial processes	Yes. It's produced out of seaweed by separation processes	+	
	undergo chemical synthesis if alternative substances/technologies not available	No	++	

	use maintains authenticity of the product	Yes. It will be used for the production of new types of products. It does not influence the authenticity in a negative way	+
	[does not detract from the overall quality]	Alginate does not interact in a chemical way with the components of the foods, therefore it's not to expect that there is a negative impact	+

PROPOSED SUBSTANCE: **Arabic gum as additive (INS 414)**
- amended usage as glazing agent for egg

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes. Substance is of natural origin	++	IFOAM
	substance is necessary/essential for its intended use	Yes. see 5.1.c	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Yes . Product out of acacia tree resin; no negative effects are reported	++	
	lowest negative impact on human or animal health and quality of life	Yes. ADI not specified	++	
	approved alternatives not available	No alternatives are known for egg glazing.	0	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	It is needed as thickener for different products and as glazing agent for eggs	+	
	undergo mechanical/physical, biological/enzymatic or microbial processes	Yes. Simple process of processing with mechanical treatment	++	

	undergo chemical synthesis if alternative substances/technologies not available	No	++
	use maintains authenticity of the product	Yes. It will be used for the production of new types of product. So it does not influence the authenticity	+
	[does not detract from the overall quality]	The application as glazing agent has no direct impact on the food itself.	+

IFOAM fact sheet “Sodium Nitrite”

Substance E – number: Sodium Nitrite E 250

Usage: Colour maintaining agent, Preservative

Origin: A product out of Nitrates

Proposed usage: For the production and processing of meat products and different sausages

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes. The substance is in very small amounts present in nature.	-	IFOAM
	substance is necessary/essential for its intended use	Yes, see 5.1c.	0	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No special negative effects are known. The environmental problems of the nitrogen industry (e.g. energy use) are related to this products to.	+	
	lowest negative impact on human or animal health and quality of life	The substance has mutagenic effects on different micro-organisms. JECFA 0.2 mg/kg/d SCF 0.06 mg/kg/d (not valid for children).	--	
	approved alternatives not available	No. The most products can be produced without nitrite.	-	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	The substance is used for the production of meat products and sausages. The most important effect is that the “red colour” of the fresh meat will be protected and nitrites will produce the typical flavour. The secondary effects is the anti microbiological effect, which is an additional food safety aspect during processing of such foods.	+	

	undergo mechanical/physical, biological/enzymatic or microbial processes	No.	O
	undergo chemical synthesis if alternative substances/technologies not available	Produced out of nitrogen oxides; salts of nitric acid. It's a simple chemical reaction. Nitrite is product out of Nitrates.	+
	use maintains authenticity of the product	On one hand the substance keeps the original meat colour. In the most countries the consumer expectation toward the outfit of this products is related to the effects caused by nitrates. That's the very delicate problem with nitrates and nitrites.	+
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality of product.	-

Additional Information

ARGUMENTS IN FAVOUR

- The usage of nitrites is primarily to gain a typical colour and taste for different sausages.
- Because the consumer is very much adapted to this taste and colouring, if a company wants to reach a lot of consumers it will not have the possibility to inform them about the use of nitrites, they are important for the success in selling organic products. The grey coloured sausages, produced without nitrites, can be judged as rotten or poor quality sausages.
- Nitrite also works as a preservative and significantly reduces the fat oxidation and enables a longer keeping time for a lot of products.
- For some products (e.g. raw sausages or raw meat products) the substance has a functionality in helping to avoid the growth of dangerous micro-organisms (salmonella and clostridium botulinum). There are possibilities to process safe products without nitrites but it needs a special technological know-how which is not present everywhere, especially not in small-scale on farm processing units.

ARGUMENTS AGAINST

- For many years, consumer organizations have been strongly opposed to Nitrites because the substance is a well know toxin. And they cannot understand that this substance would be actively added to foods (especially to organic foods)!
- A number of companies (smaller and middle sized) have developed certain techniques to produce organic meat and sausage products without Nitrites. They strongly fight for their know-how and they push the argument that Nitrites and organic processing should not be combined where possible.
- In respect to the growing awareness of the consumers toward food safety, Nitrites with clear limitations should be used.

DESCRIPTION OF THE DISCUSSION PROCESS

- The discussion about Nitrites has been going on since the beginning of organic meat processing. It is a very difficult issue, which has lead to sometimes a very emotional discussion. The IFOAM General Assembly has rejected in the year 2000 to list Nitrates in the IFOAM Basic Standards.

- In practice, organic meat and sausages produced both with and without Nitrites are present on the market place.
- Several certifiers have allowed Nitrites because of the arguments that. 1. It's a help to prevent, especially amongst the very small processors, problems that could be caused by inappropriate technologies. 2. That it is needed to reach the consumers because they would not accept meat products without Nitrites.
- Ultimately it is a political decision that has to be taken. Some certifiers have also proposed to set a time limit for the allowance during 3-4 years, after which a re-evaluation of the situation will be done.

Documentation "nitrites, Nitrates and sulphites as food additives – health aspects and the EU regulation"

Danish minister of agriculture 2001.

PROPOSED SUBSTANCE: SODIUM AND POTASSIUM NITRATE ("SALTS OF NITRIC ACID") / JANUARY 2003

Substance E – number: Sodium- Potassium nitrate E 251 250/ Salts of nitric acid

Usage: Preservative, Colour stabilizer (Sausages/Cheese), Antioxidants

Origin: Produced out of nitrogen oxides/ salts of nitric acid

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes. The substance is often present in nature.	+	IFOAM
	substance is necessary/essential for its intended use	Yes, see 5.1c.	0	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No special negative effects are known. The environmental problems of the nitrogen industry (e.g. energy use) are related to this products to.		
	lowest negative impact on human or animal health and quality of life	ADI 5 mg/kg/d (JEFCA). The biggest problem related to nitrate is Nitrite which will be produced out of Nitrate during the food processing.	-	
	approved alternatives not available	No.	--	

Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	The substance is used for the production of meat products and sausages. The most important effect is that the “red colour” of the fresh meat will be protected and nitrates will produce the typical flavour. The secondary effects is the antioxidative activity, which prevents the fat and the anti microbiological effect, which is an additional food safety aspect during processing of such foods.	O
	undergo mechanical/physical, biological/enzymatic or microbial processes	No.	--
	undergo chemical synthesis if alternative substances/technologies not available	Produced out of nitrogen oxides/ salts of nitric acid. It's a simple chemical reaction. Alternatives are available.	-
	use maintains authenticity of the product	On one hand the Substance keeps the original meat colour. In the most countries the consumer expectation toward the outfit of this products is related to the effects caused by nitrates. That's the very delicate problem with nitrates and nitrites.	+
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality of product.	0

Documentation “nitrites, Nitrates and sulphites as food additives – health aspects and the EU regulation” Danish minister of agriculture 2001.

PROPOSED SUBSTANCE: Sodium carbonate INS 500 as PA as additive

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes. Product is available in nature and of mineral origin.	+	IFOAM
	substance is necessary/essential for its intended use	Yes, see 5.1c.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Yes. It is a product out of milled stone or of carbonate industry. No negative effects are reported.	++	
	lowest negative impact on human or animal health and quality of life	Yes. ADI not yet specified, although JECFA has evaluated the substance.	++	

	approved alternatives not available	Yes. It is the most natural substance which is permitted and available for this usage.	+
Section 5.1 (c) Used as additives or processing aids in the production/pr eservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	The use is essential e.g. for the processing of specific cheese types.	+
	Undergo mechanical/physical, biological/enzymatic or microbial processes	Yes. It undergoes a mechanical process.	+
	Undergo chemical synthesis if alternative substances/technologies not available	Yes. The substance could be produced from simple chemical processes.	-
	use maintains authenticity of the product	Yes. It will be used for the production of new types of products. So it does not influence the authenticity in a negative way.	+
	[does not detract from the overall quality]	No information are available which demonstrate a negative impact on overall quality.	0

Comments: **Denmark:** The technological need and what happens if it is not allowed is not described. In any case the specific type of cheese should be mentioned. Denmark cannot support the inclusion on this substance as additive or processing aid.

PROPOSED SUBSTANCE: Calcium citrate as additive for plant materials

Substance E number: E333 Calcium Citrate)

Usage: Acid regulator, stabiliser, dispersing agent, antioxidants

Origin: Out of citric acid/fermentative with *aspergillus niger*

CRITERIA		EVALUATION AGAINST CRITERIA INCLUDE: DETAILED DESCRIPTION OF USE AND CONSEQUENCES IF USE OF A SUBSTANCE IS NOT PERMITTED.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes. The substance is often present in nature.	+	IFOAM Supported by IDF
	substance is necessary/essential for its intended use	Yes, see 5.1c.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	Yes. Produced by traditional biotechnological methods. No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes. ADI “not specified”. Not specified by JECFA. (IDF)	++	
	approved alternatives not available	Yes. The most natural and available substance for this usage. None available. (IDF)	++	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	The processing of potatoes, and different fruit preparations will use the substance. Further on for e.g. horseradish products or products out of with grape juice. Stabilizer and neutralizing buffer salt used for milk and cream and processed cheese products subject to heat treatment (pasteurisation) needed to avoid precipitation of milk proteins or separation of milk fat. (DF)	+	

undergo mechanical/physical, biological/enzymatic or microbial processes	Yes. It is produced out of starch with the help of micro organisms. Origin is Calcium and Sodium salt. (IDF)	+
undergo chemical synthesis if alternative substances/technologies not available	No.	+
use maintains authenticity of the product	Yes. It will be used for the production of new types of products derived from livestock products and in a way that it does not influence the authenticity of the product. Needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurisation. Does not influence the authenticity of the product. (IDF)	+
[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality of product. However natural degradation processes will be stopped.. The chemical structure and the reaction within the food do not suggest a negative impact. (IDF)	-

PROPOSED SUBSTANCE: Calcium Lactate (INS 327)

Usage: **Stabilizer/thickener for pasteurised milk and cream products**

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	+	

	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+
	lowest negative impact on human or animal health and quality of life	Yes, ADI not limited (not specified by JECFA)	++
	approved alternatives not available	None available.	-
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Thickener for pasteurized milk and cream products.	+
	undergo mechanical/physical, biological/enzymatic or microbial processes	No	+
	undergo chemical synthesis if alternative substances/technologies not available	Prepared by the neutralization of lactic acid with calcium carbonate or calcium hydroxide.	-
	use maintains authenticity of the product	Yes, needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurization.	+
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	+

PROPOSED SUBSTANCE: **Sodium Phosphate (INS 339)**
 Potassium Phosphate (INS 340)

Usage: Sodium phosphate: **Stabilizer, thickener for pasteurised milk and cream products**

 Potassium phosphate: **Emulsifying salt for melted and processed cheese/stabilizer for pasteurised creams**

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes.	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes. Maximum level 2g/Kg singly or in combination as set by JECFA.	+	
	approved alternatives not available	None available	+	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Emulsifying salt for melted and processed cheese and stabilizer for pasteurized creams	++	
	undergo mechanical/physical, biological/enzymatic or microbial processes	No	-	
	undergo chemical synthesis if alternative substances/technologies not available	Prepared by reacting acids with sodium or potassium carbonate.	-	

	use maintains authenticity of the product	Yes, needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurization. Does not influence the authenticity of the product.	+	
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	+	

PROPOSED SUBSTANCE: **Diphosphates (INS 450)**
Polyphosphates (INS 452)

Usage: **Emulsifying salt for melted and processed cheese and stabilizer for pasteurised creams**

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes. Maximum level 2g/kg singly or in combination as set by JECFA	+	
	approved alternatives not available	None available	+	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Emulsifying salt for melted and processed cheese and stabilizer for pasteurized creams.	++	

undergo mechanical/physical, biological/enzymatic or microbial processes	No	-
undergo chemical synthesis if alternative substances/technologies not available	Prepared by reacting acids with sodium phosphate	-
use maintains authenticity of the product	Yes, needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurization. Does not influence the authenticity of the product.	+
[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	+

PROPOSED SUBSTANCE: Nitrous Oxide (INS 942)

Usage: **Packaging gas, propellant for whipped creams**

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes	+	
	approved alternatives not available	None available	+	

Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Needed for a propellant and aerating agent for cream dispensed in whipped form.	++
	undergo mechanical/physical, biological/enzymatic or microbial processes	Manufactured by thermal decomposition of ammonium nitrate	+
	undergo chemical synthesis if alternative substances/technologies not available	No	+
	use maintains authenticity of the product	Yes	+
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	+

PROPOSED SUBSTANCE: Cornstarch - Native

Usage: **thickener for flavoured and heat treated fermented milks.**

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes	+	

	approved alternatives not available	None available	+
Section 5.1 (c) Used as additives or processing aids in the production/pr eservation of food	[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]	Thickener for dairy products and an anti caking agent for shredded and grated cheese.	++
	undergo mechanical/physical, biological/enzymatic or microbial processes	Natural source from corn maize	++
	undergo chemical synthesis if alternative substances/technologies not available	No	++
	use maintains authenticity of the product	Yes	+
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	+

OTHER COMMENTS

IFOAM

Sources used for food processing:

- http://apps3.fao.org/jecfa/flav_agents/flavag-q.jsp
- http://www.europa.eu.int/comm/food/fs/sfp/addit_flavor/additives/index_de.html
- Codex Alimentarius 2001: General Standard for food additives Codex Stan 192-1995, Rev. 3-2001
- IFOAM 2002: Basic standards of IFOAM (International federation of organic agriculture movements). Tholey Theley 2002
- EC 2001: Report of the European Commission on dietary food additive intake in the European Union. Bruxelles
- Glandorf u.a.2002: Handbuch Lebensmittelzusatzstoffe. Behr's Verlag, Hamburg
- Kessler H.G. 1996: Lebensmitteltechnologie und Bioverfahrenstechnik. Verlag A. Kessler, München-Freising
- Praedl u.a. 1988: Fleisch Technologie und Hygiene der Gewinnung und Verarbeitung. Verlag Eugen Ulmer Stuttgart
- Schweisfurth K.L. 1996: Ökologische Qualität im Fleischerhandwerk. Deutscher Fachverlag, Frankfurt am Main